

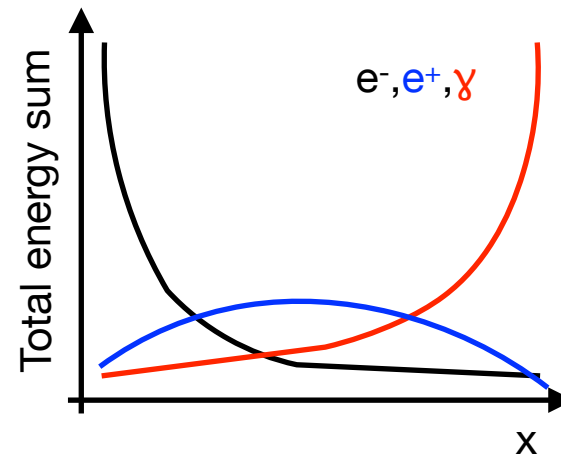
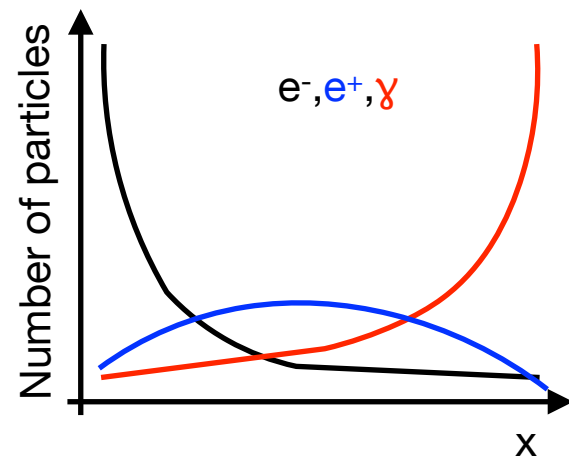
Brems

Simulation Chapter Plots

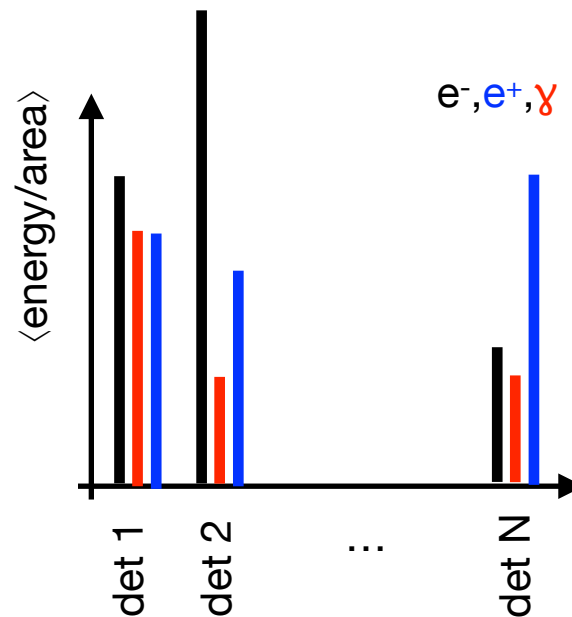
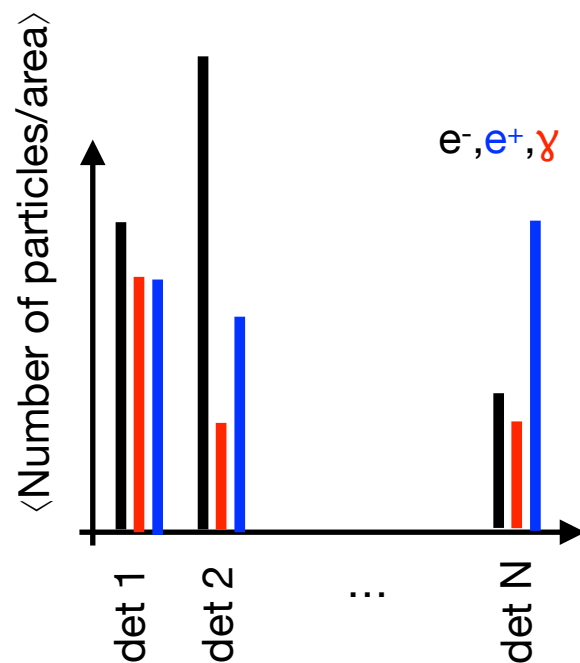
Ruth Jacobs

Analysis Daily
17th November 2020

Proposed Plots: Motivating the Technology



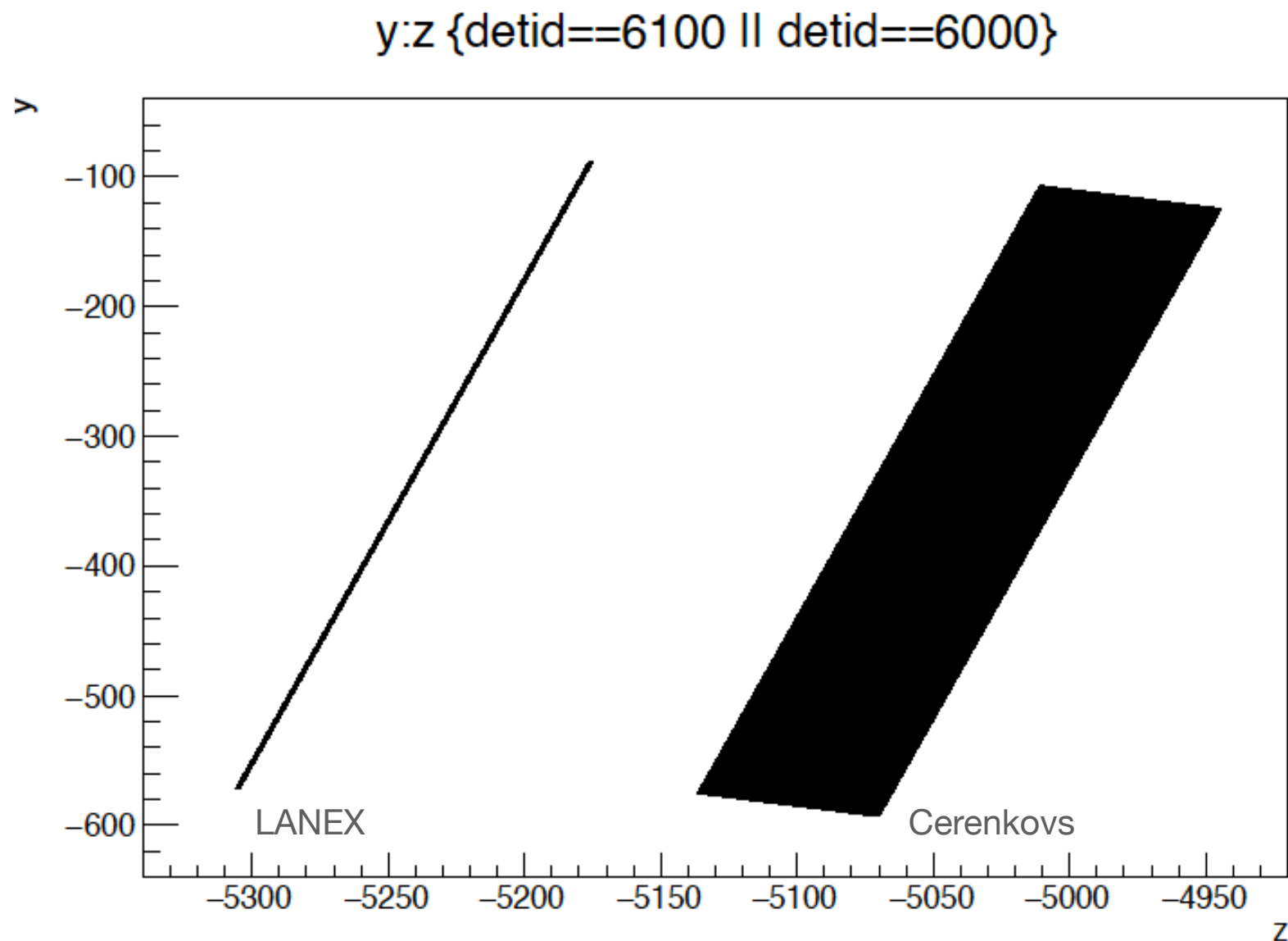
- we have steep spectra
- need to show at least once strong x-dependence
- for each det. system



- (Noam already showed similar charts)
- very nice & compact summary
- only single number/system

Histograms and/or summary bar charts?

Brems system



- Lanex screen and Cerenkovs in initial Brems spectrometer

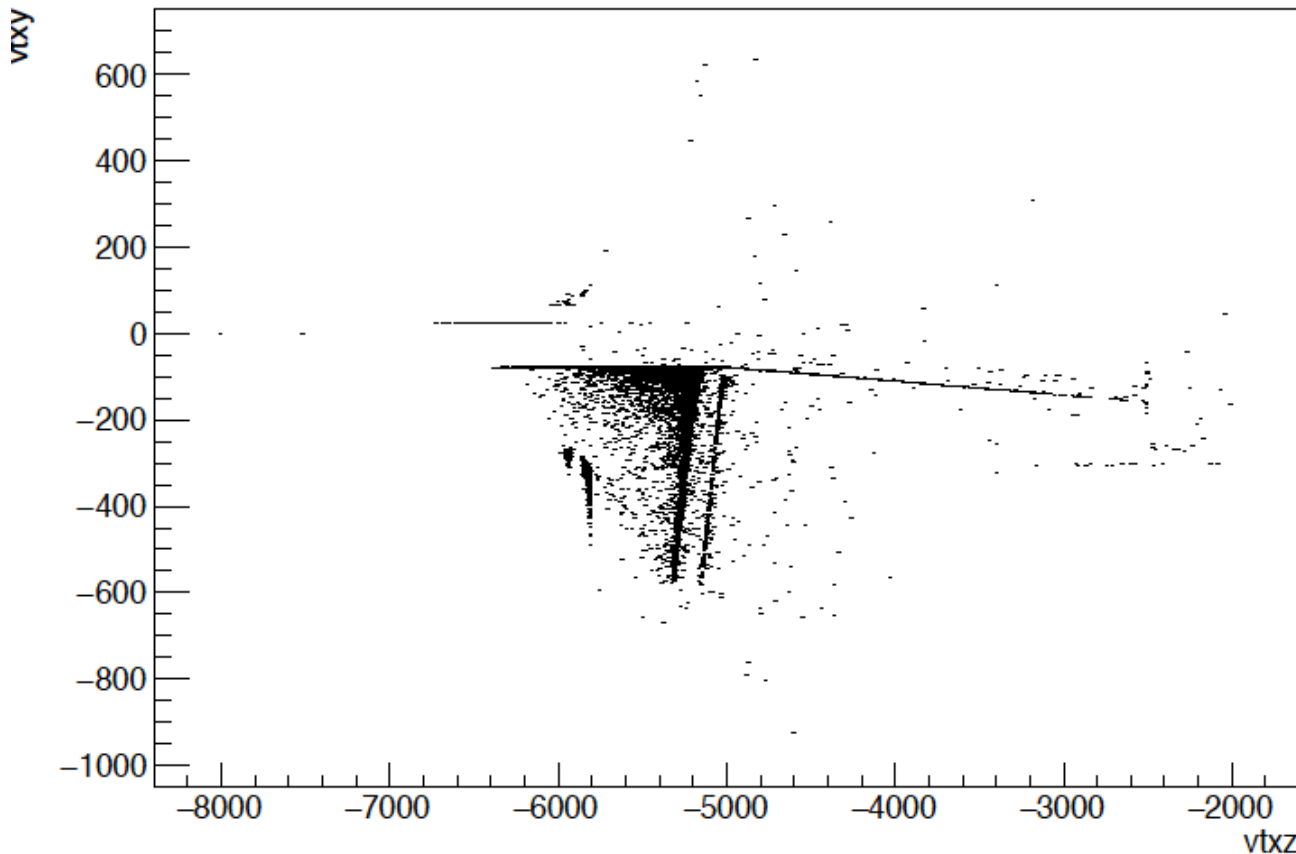
- Aim: Background estimate for Brems
- we have no simulation “without the target”
- expect beam background will mostly come from the back of the detectors
(expect little interaction of the beam electrons on their way to the Brems system)

Use vtxz>-5170 for LANEX and vtxz>4940 for Cerenkovs to select Backgrounds!

Where do Backgrounds come from?

LANEX screen, window cut

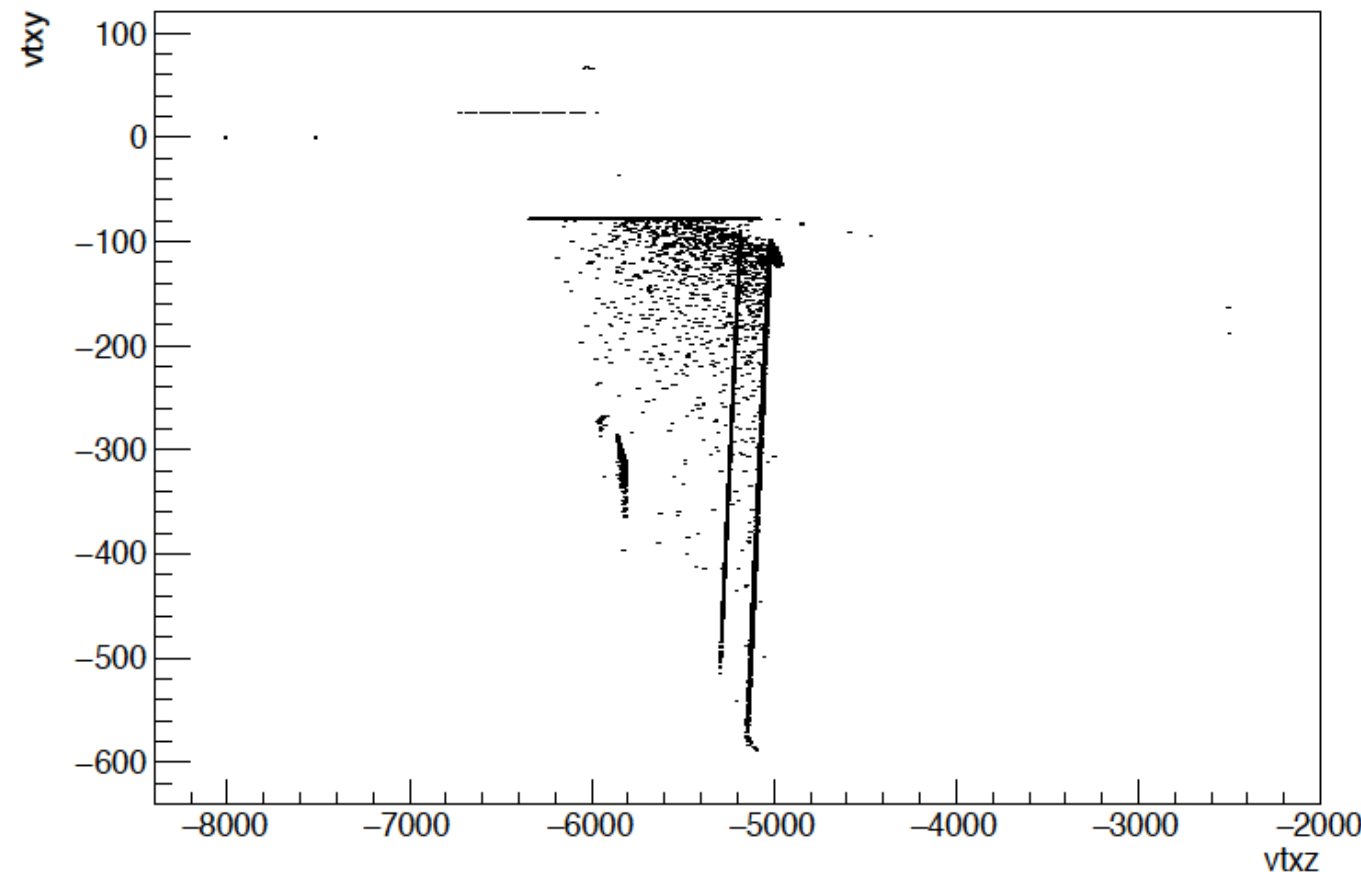
vtxy:vtxz {detid==6000 && pdg==11 && abs(x)<10}



- interactions from:
 - beam pipe
 - Cerenkov
 - air (?)
- most from the front, but also some from the back
- energy threshold?

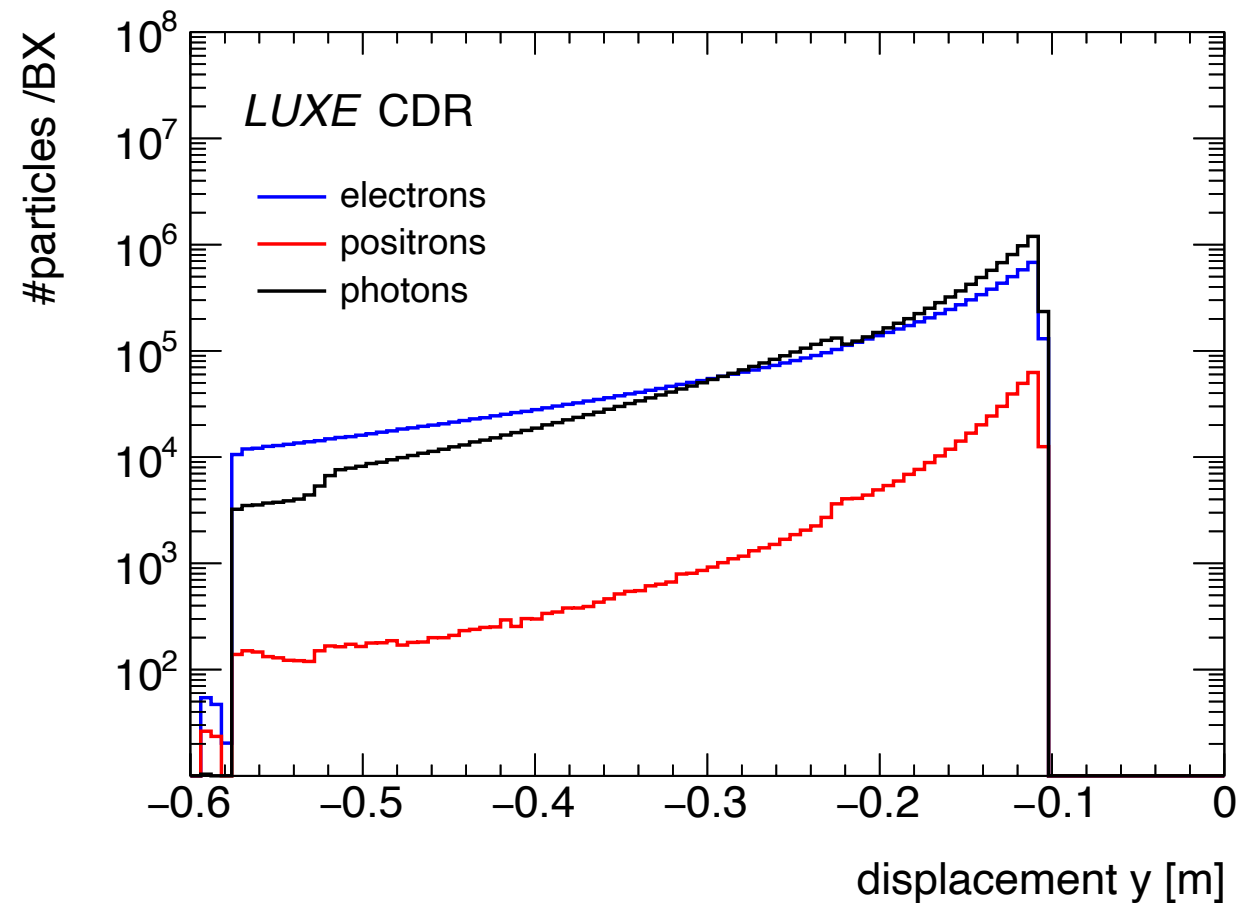
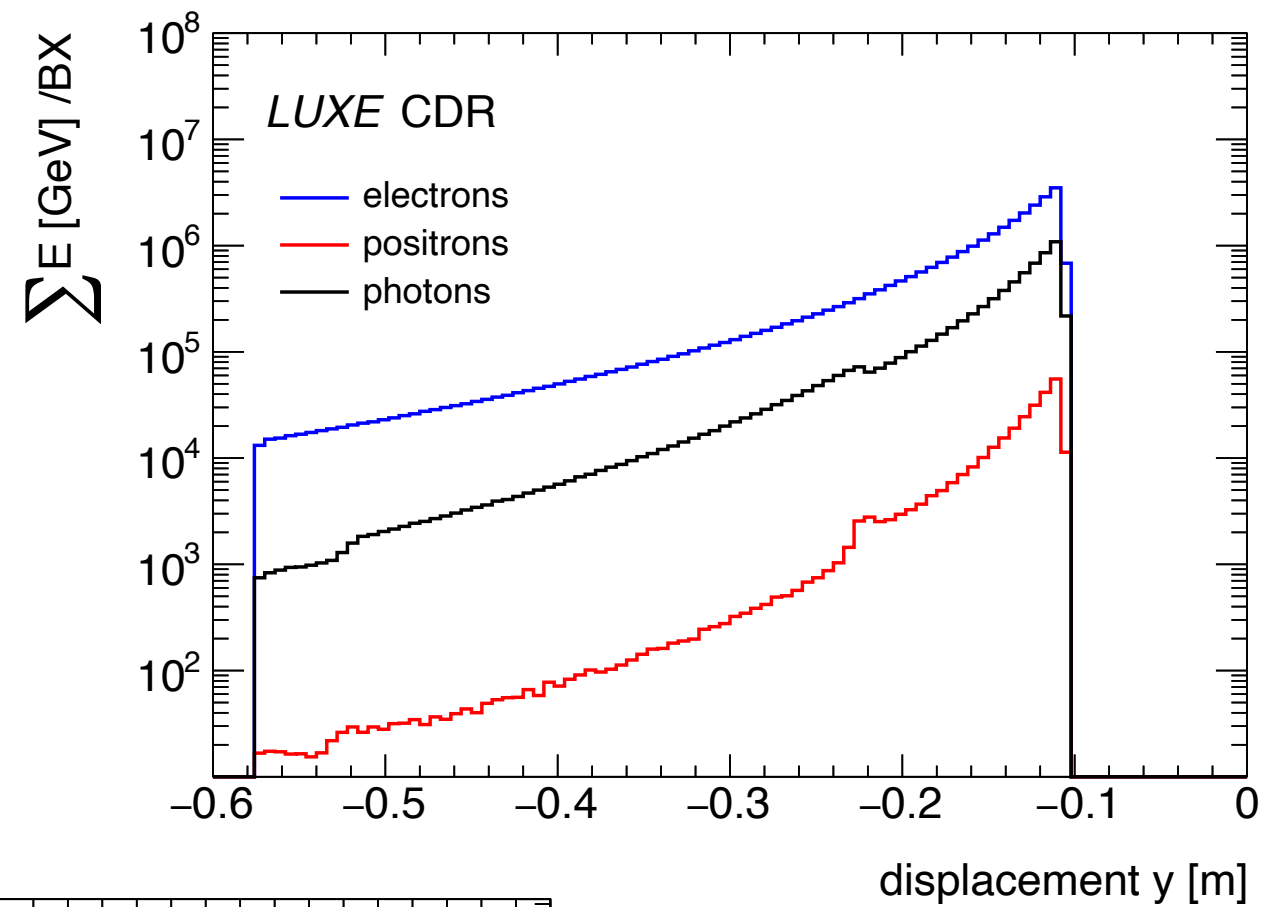
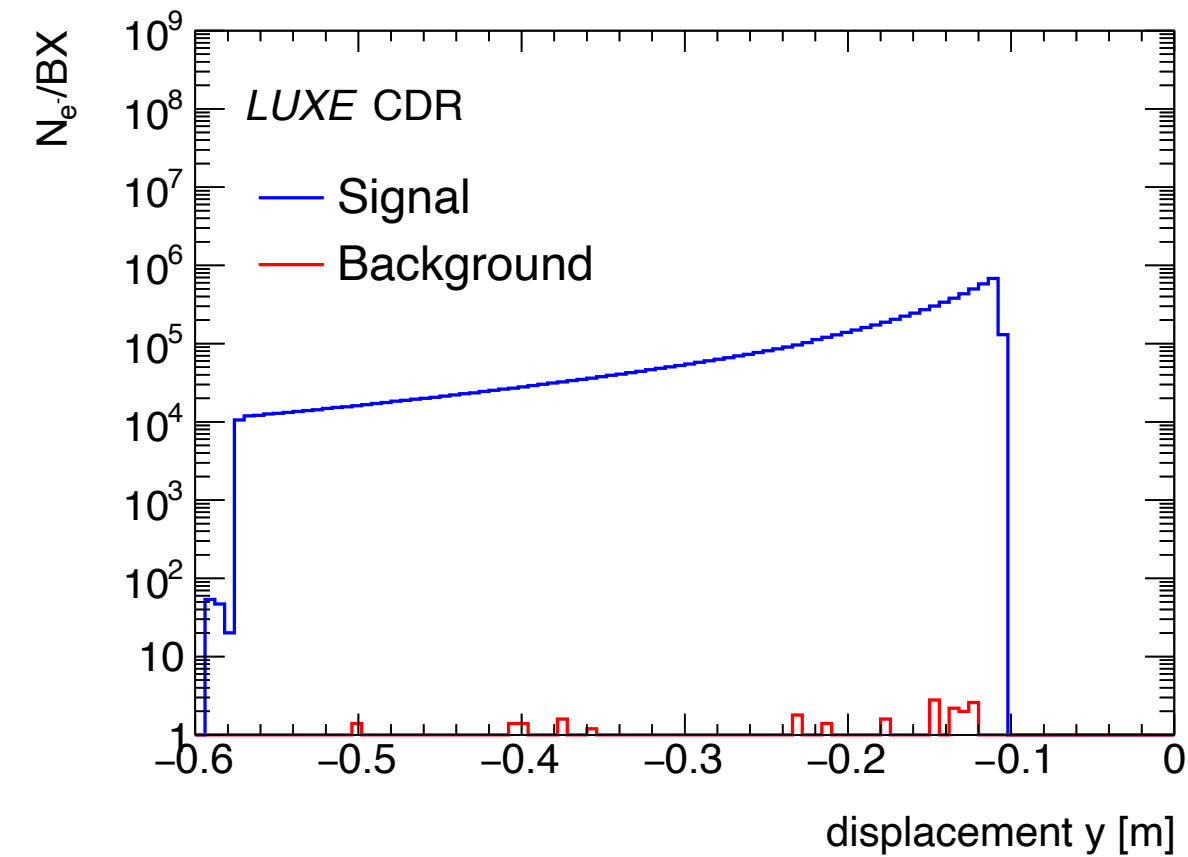
Cerenkov + threshold and window cut

vtxy:vtxz {detid==6100 && pdg==11 && E>0.02 && abs(x)<10}



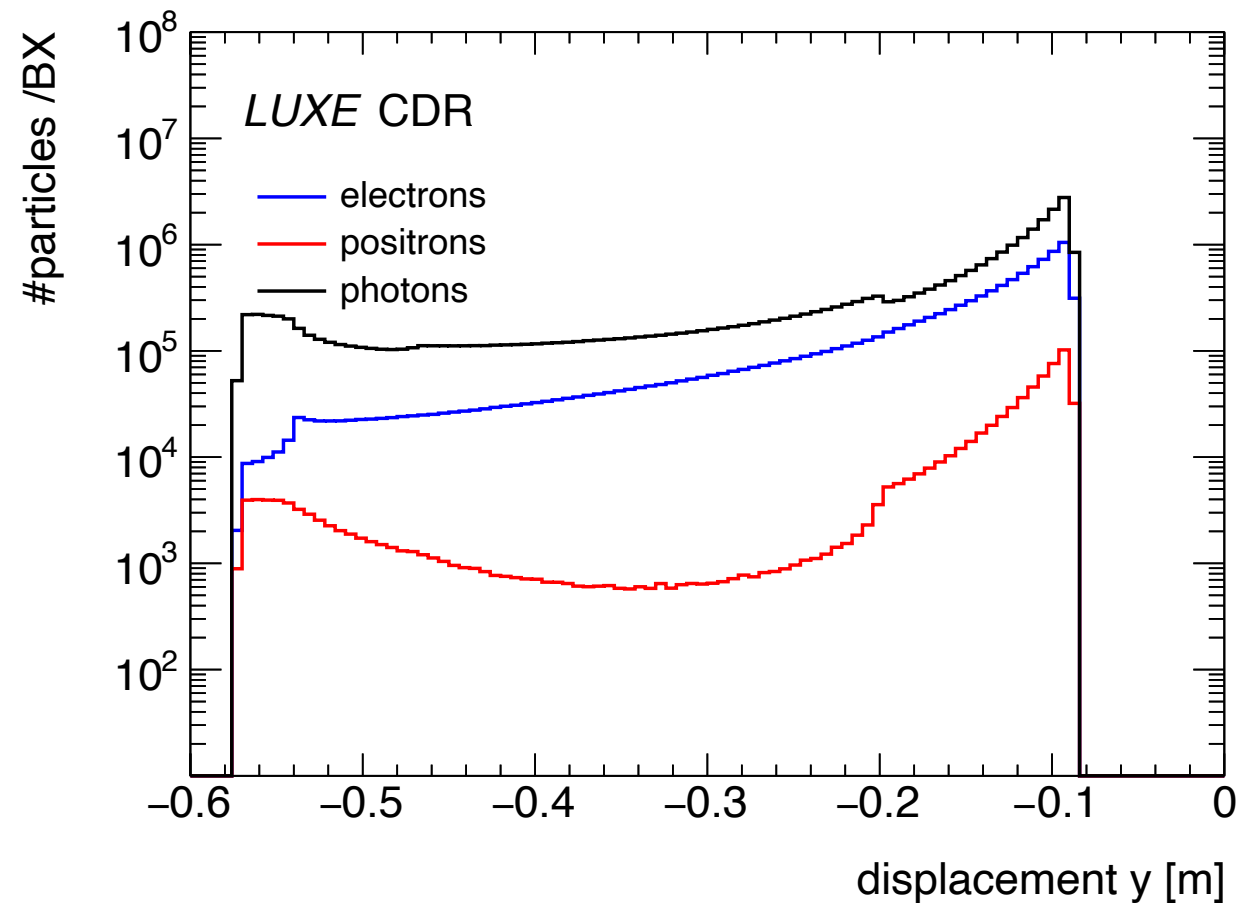
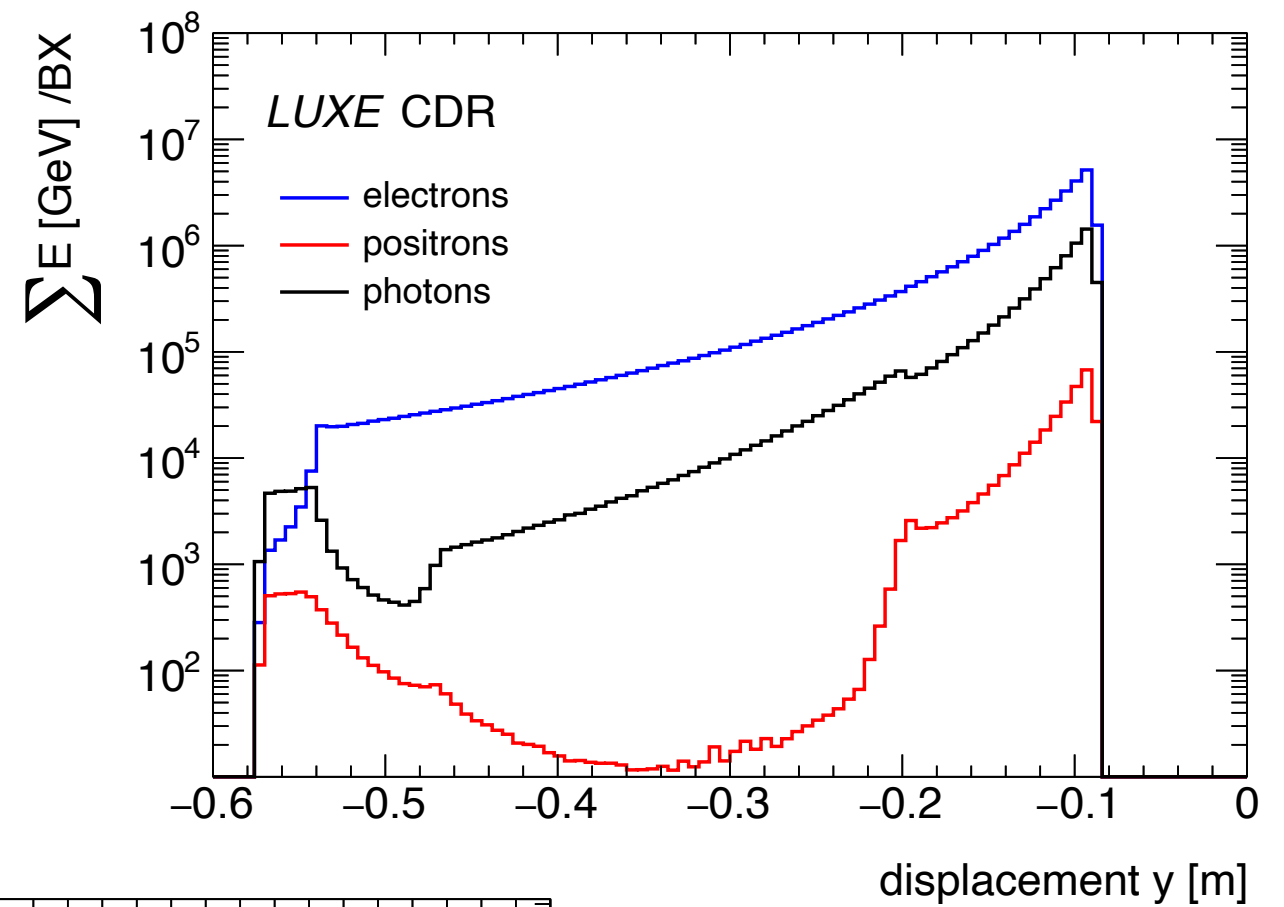
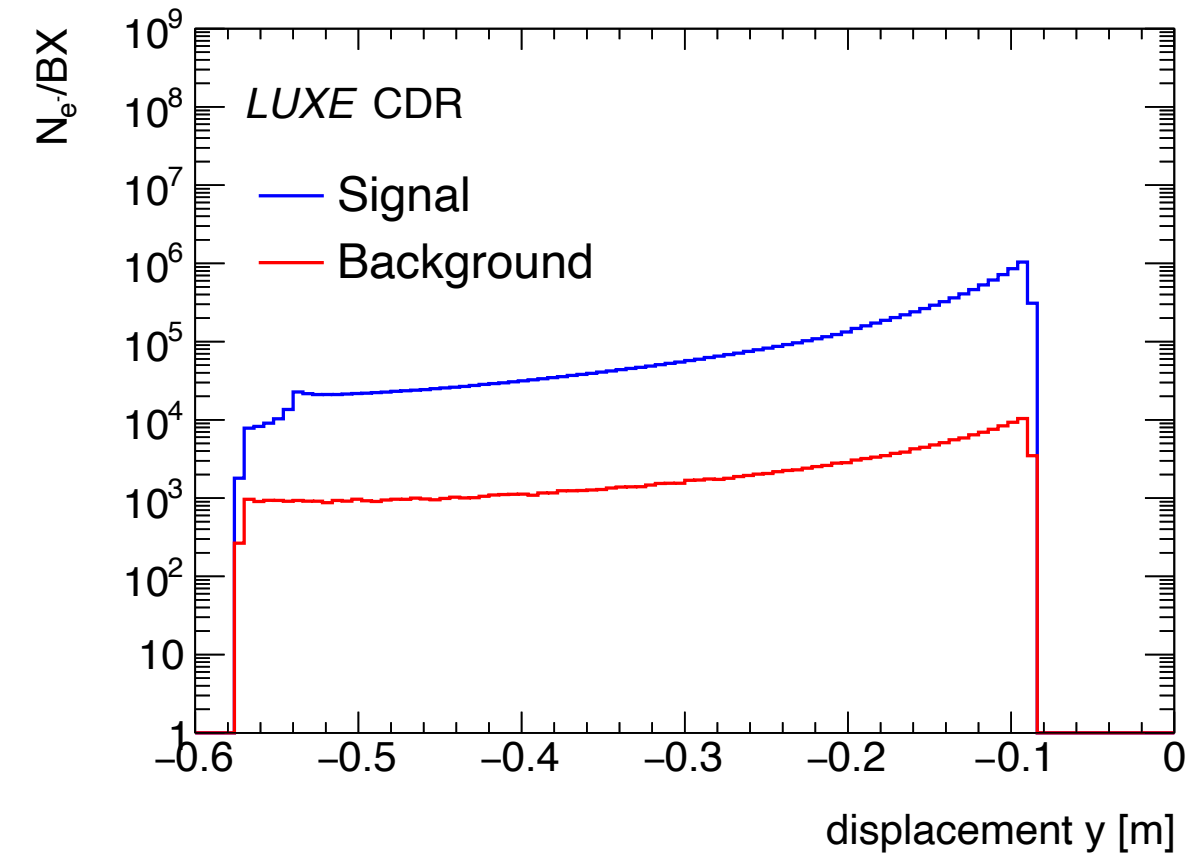
- interactions from:
 - beam pipe
 - Cerenkov window
 - air (?)
- very little from the back

Plots for Cerenkovs



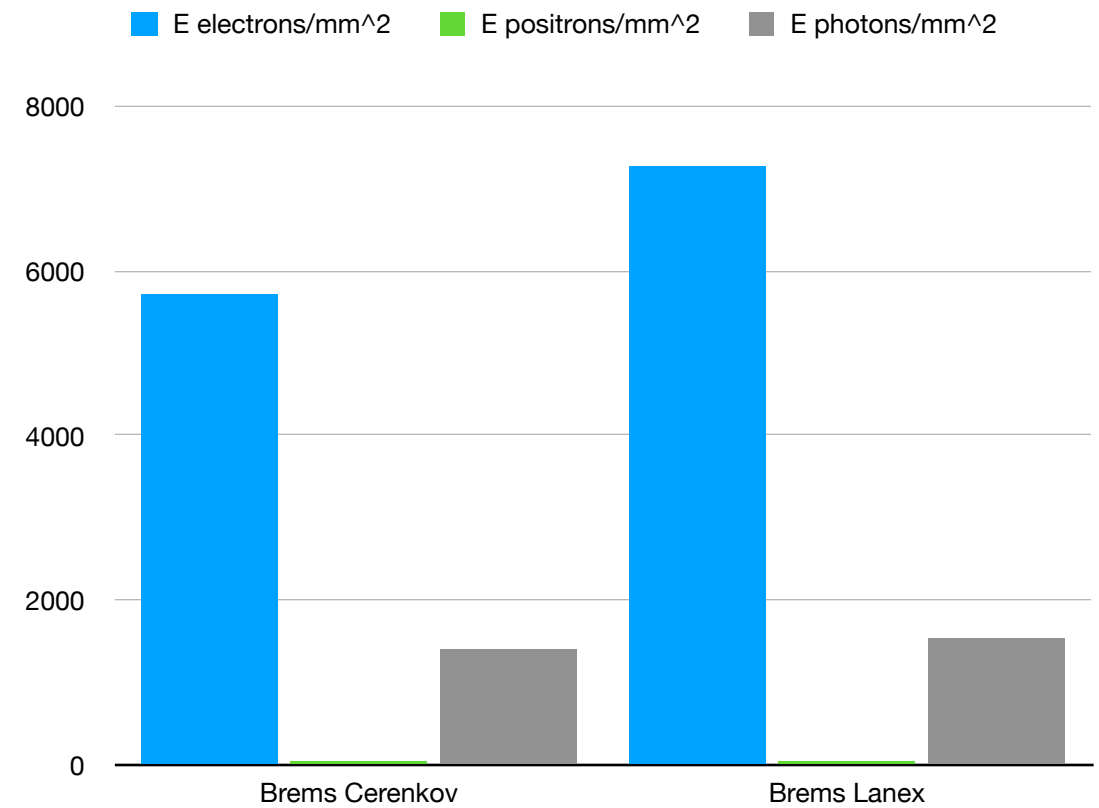
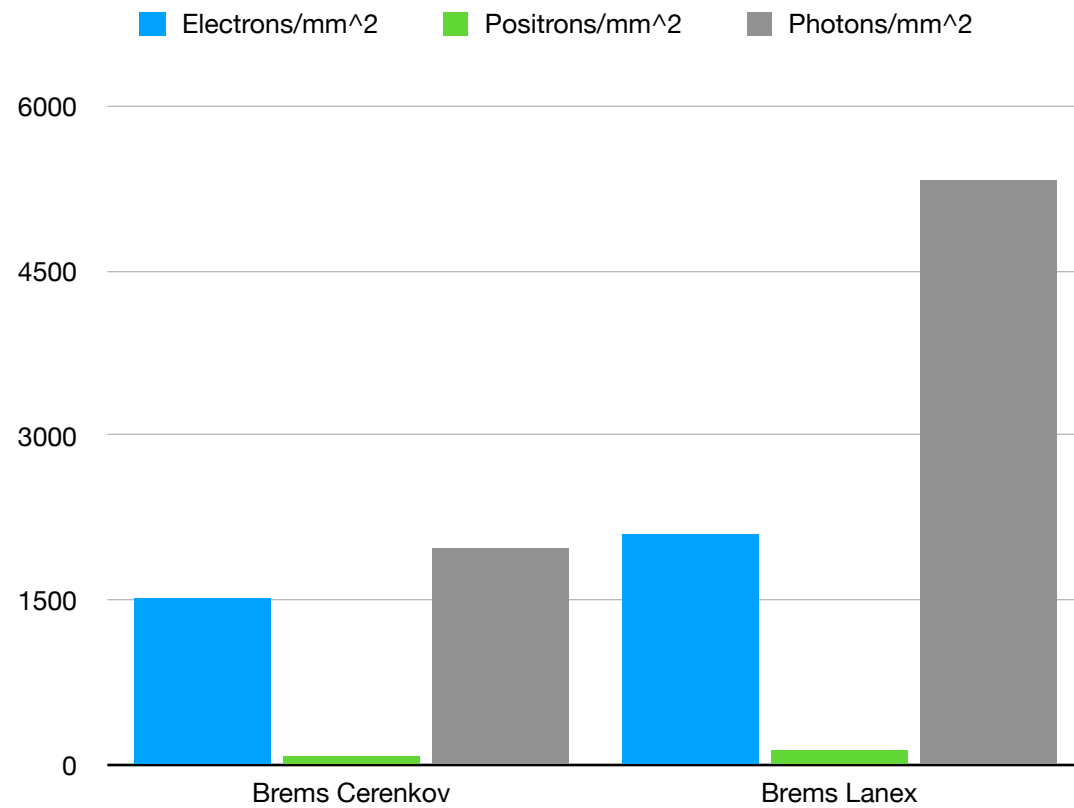
+ numbers for bar charts
(integrals of these plots)

Plots for LANEX



+ numbers for bar charts
(integrals of these plots)

Bar Charts



+ selection cuts (Energy threshold & window) for Cerenkovs a bit arbitrary here...